

AD-A141 801

DARCOM PROCUREMENT WORK DIRECTIVE PROCESSING  
METHODOLOGY(U) ARMY PROCUREMENT RESEARCH OFFICE FORT  
LEE VA C M LOWE MAY 84 APRO-83-03

1/ 6

UNCLASSIFIED

F/G 5/1

NL

AMSIA

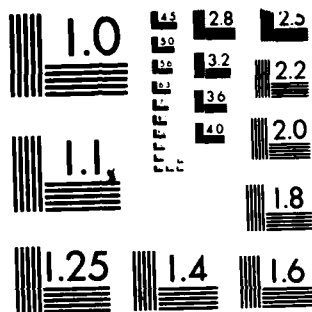
END

DATE

FILED

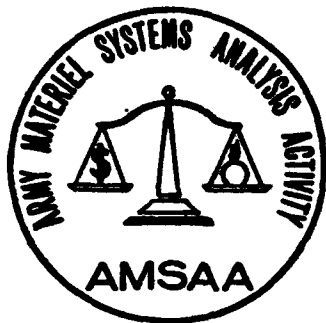
7-84

DTIC



MICROCOPY RESOLUTION TEST CHART  
NATIONAL BUREAU OF STANDARDS-1963-A

5



# AMSAA

ARMY PROCUREMENT RESEARCH OFFICE

APRO 83-03

FINAL

DARCOM PROCUREMENT WORK DIRECTIVE  
PROCESSING METHODOLOGY

MAY 1984

AD-A141 801

DTIC FILE COPY

DTIC  
ELECTE  
JUN 4 1984  
S A D  
A

Approved for Public Release; Distribution Unlimited  
U.S. ARMY MATERIEL SYSTEMS ANALYSIS ACTIVITY  
ARMY PROCUREMENT RESEARCH OFFICE  
FORT LEE, VIRGINIA 23801

84 05 30 057

APRO 83-03  
FINAL

DARCOM PROCUREMENT WORK DIRECTIVE PROCESSING METHODOLOGY

by

Charles M. Lowe, Jr.

The pronouns "he," "his," and "him," when used in this publication, represent both the masculine and feminine genders unless otherwise specifically stated.

Information and data contained in this document are based on input available at time of preparation. Because the results may be subject to change, this document should not be construed to represent the official position of the US Army.

Approved for Public Release; Distribution Unlimited

US Army Procurement Research Office  
US Army Materiel Systems Analysis Activity  
Fort Lee, Virginia 23801

## EXECUTIVE SUMMARY

A. BACKGROUND/PROBLEM. An Army Audit Agency (AAA) audit of US Army Materiel Development and Readiness Command (DARCOM) contracting workload management found the Procurement Work Directive (PWD) processing procedures were not efficient. The AAA believed alternate procedures could be developed to allow earlier involvement of the central procurement activity in PWD processing. Changes to the Procurement Ageing and Staging System (PASS) were also recommended to improve its usefulness as a workload management tool. The objective of improving PWD processing is to reduce administrative leadtime (ALT) inventory requirements.

B. OBJECTIVES. The objectives of this study were to determine if the current (PWD) processing systems and PASS are factors in the length of ALT and determine if the proposed AAA changes or other alternatives would reduce ALT.

C. STUDY APPROACH. Research began with a review of literature and current policy on document flow processes. The PWD processes at DARCOM Major Subordinate Commands (MSC's) were studied to determine the effects of the procedures and the use of PASS on ALT. This research was used to determine if alternative procedures were required and feasible.

D. CONCLUSIONS. While the MSC's procedures do contribute to longer ALT, the AAA recommended use of simultaneous PWD processing by procurement and other MSC's activities is not the best solution. The current practice of validating and updating the procurement package, after a PWD is issued, which the AAA felt could be done while procurement develops the solicitation, should be accomplished on a continuous basis instead of during ALT. The AAA recommended changes to PASS would not reduce ALT or improve the performance of PASS functions. Development of models of the processes required by the use of different procurement instruments and their impacts on ALT will be possible using data that will be available from the new Procurement Automated Manpower Utilization and Projection System (PAMUPS) after it has been in use for a minimum of a fiscal year.

\* Procurement Work Directive



A1

## TABLE OF CONTENTS

	<u>PAGE</u>
EXECUTIVE SUMMARY .....	ii
LIST OF FIGURES .....	v
LIST OF TABLES .....	vi
 <u>CHAPTER</u>	
I. <u>INTRODUCTION</u> .....	1
A. Background/Problem .....	1
B. Study Objectives .....	2
C. Study Approach .....	3
D. Glossary .....	3
II. <u>SECONDARY ITEM ACQUISITION PROCESS</u> .....	6
A. Introduction .....	6
B. Acquisition Process .....	6
1. Organizational Element Inputs .....	7
2. Central Procurement Process Workflow .....	11
C. MSC PWD Workflows .....	19
1. Ammunition, Munitions, and Chemical Command (AMCCOM) Pre-PALT PWD Flow .....	20
2. Communications-Electronic Command (CECOM) Pre-PALT PWD Flow .....	22
3. TSARCOM Pre-PALT PWD Flow .....	22
4. Other MSC Pre-PALT PWD Processes .....	25
5. Air Force Procurement Request Processing .....	25
D. Summary .....	28

# TABLE OF CONTENTS (CONT'D)

<u>CHAPTER</u>	<u>PAGE</u>
III. <u>AUTOMATED SYSTEMS AND THE PALT MODEL</u> .....	30
A. Introduction .....	30
B. CCSS Processes .....	30
1. PASS .....	30
2. Other ALT Monitoring Methods .....	32
C. PALT MODEL .....	33
IV. <u>CONCLUSIONS AND RECOMMENDATIONS</u> .....	38
A. Conclusions .....	38
B. Recommendations .....	38
SELECTED BIBLIOGRAPHY .....	39
STUDY TEAM COMPOSITION .....	41

## LIST OF FIGURES

<u>FIGURE</u>		<u>PAGE</u>
1	DELTA CHART OF CENTRAL PROCUREMENT SYSTEMS PROCESS - CONTRACT EXECUTION .....	12
2	AMCCOM PRE-PALT PWD FLOW .....	21
3	CECOM PRE-PALT PWD FLOW .....	23
4	TSARCOM PRE-PALT PWD FLOW .....	24
5	NUMBER OF PROCESSING POINTS ENCOUNTERED BY TSARCOM PWD'S .....	27

# LIST OF TABLES

<u>TABLE</u>		<u>PAGE</u>
1	AVERAGE DAYS FOR PWD'S IN INDIVIDUAL TSARCOM PROCESSING POINTS .....	26
2	REGUALTORY IMPACTS ON ADMINISTRATIVE LEADTIME .....	34

## CHAPTER I

### INTRODUCTION

#### A. BACKGROUND/PROBLEM.

The Army Audit Agency (AAA) conducted an audit of contracting workload management within the US Army Materiel Development and Readiness Command (DARCOM) from March 1981 through April 1982. The audit objectives included the evaluation of internal procedures for processing procurement work directives (PWN's) at three commands and evaluation of internal workload controls to include management information systems. The audit findings with respect to these were interrelated. According to the AAA, the PWN processing procedures were not efficient and the inefficiency was at least partially due to the use of the Procurement Aging and Staging System (PASS) to control the flow of the PWN's.

The AAA believed an alternate procedure could be developed to allow earlier involvement of the central procurement activity in PWN processing. The proposal for changes in the workload flow would also permit simultaneous processing of PWN's by several activities. Changes to the PASS were recommended to improve its usefulness as a workload management tool. The sum result of developing a new procedure would be a decrease in stockage requirements for administrative leadtime (ALT) through a more responsive procurement process.

In addition to the AAA proposals, DARCOM requested the Army Procurement Research Office investigate the feasibility of developing a Procurement Administrative Leadtime (PALT) Model. The model would show the effects of time added to the procurement process by law or regulation and by levels of review and approval performed within the MSC. Operation of law or regulation is an

often used reason for long PALT and a model would be a means to assess the validity of the reason.

#### B. STUDY OBJECTIVES.

The objectives of this study were:

1. Determine if and to what extent the existing PWD process contributes to the length of ALT.

2. Determine if the Procurement Aging and Staging System (PASS), a PWD tracking system, is a factor in the length of ALT.

3. Determine the effects of PASS status codes on ALT.

4. Determine if an alternative procedure for processing PWD's which maintains document control while allowing for earlier involvement of the procurement activity is feasible. Procedure prerequisites are:

- a. The procedure must provide for simultaneous PWD processing.

- b. The adaptation of any MSC - unique procedures must be for DARCOM-wide use as a standard set of procedures.

- c. The establishment and operation of a standard set of procedures must be feasible within the existing Major Subordinate Command (MSC) organizations using the Commodity Command Standard System (CCSS).

5. Develop a "PALT Model;" i.e., a tool based on minimum regulatory days in each PWD process in the procurement directorate including observed timeframes for other required reviews such as legal and small business.

6. Review existing measurement methods, i.e., the Central Procurement Workloading Report (RCS-DRCPP 127) and the Procurement Automated Manpower and Utilization Projection System (PAMUPS), for use in measuring Procurement Administrative Leadtime (PALT) on individual contract types.

C. STUDY APPROACH.

The study and research methods employed consisted of:

1. Reviewing current literature on work and document flow processes.
2. Reviewing current PWD processes at selected MSC's to determine:
  - a. Effects of procedures on ALT.
  - b. Effects of using PASS on ALT.
  - c. Applicability of any MSC unique procedures for DARCOM-wide use.
3. Determining if an alternative procedure for PWD is required and feasible within the given constraints.
4. Analysis of the findings of 1 through 3 above to recommend policy and guidance on PWD processing, as appropriate.

D. GLOSSARY.

1. Administrative Leadtime (ALT) - ALT is the length of time from the date a PWD is generated to the date a contract is awarded for the requirement. A fixed period of 15 days is added to the actual ALT to account for the requirements determination process which produces the PWD. ALT and production lead time are the two elements used in the computation of procurement lead time which is part of the requirement objective for demand supported secondary items.

2. Commodity Command Standard System (CCSS) - The CCSS is a management information system which standardizes the wholesale logistics operations performed by DARCOM MSC's. The functional areas supported by CCSS are Provisioning, Procurement, Cataloging, Stock Control, Supply Management, Financial Management, and Maintenance Management. CCSS was designed to allow the diverse functional areas to use an integrated data base and processing concept.

3. DELTA Chart - A DELTA chart is a form of flowchart which depicts a planned flow of activities. The acronym DELTA stands for Decision, Event, Logic, Time, Activity. By incorporating events and activities with decision and logic functions, alternative or interactive situations and the required interaction of the functional elements can be displayed.

4. Major Subordinate Commands (MSC's) - MSC's, for the purpose of this report, are those DARCOM commands assigned readiness missions and operating under CCSS.

5. Pre-Procurement Administrative Lead Time (Pre-PALT) Pre-PALT is usually the portion of ALT prior to commencement of PALT during which the procurement package is compiled and validated. If PALT is halted for any reason other than a procurement related cause, the halt time is accumulated as Pre-PALT.

6. Procurement Administrative Leadtime (PALT) - PALT is the component of ALT which accounts for the length of time from acceptance of the procurement package by the procurement activity through award of the contract.

7. Procurement Package - The information required by the procurement activity to determine the procurement method to be used and to obtain responsive bids or proposals. It normally includes the technical data package and all administrative, legal, product assurance and transportation data and fiscal provisions required to adequately describe the item or service to all potential suppliers.

8. Procurement Work Directive (PWD) - PWD is a standardized computer-generated format (DARCOM Form 1095g) used in MSC's to direct procurement and maintenance management activities. The PWD contains essential data for a specific requirement to include fiscal status.

9. Technical Data Package (TDP) - The TDP is a technical description of an item adequate for use in procurement. It consists of all applicable data such as drawings or performance parameters, associated specifications and standards, quality assurance data, and packing and packaging data.

## CHAPTER II

### SECONDARY ITEM ACQUISITION PROCESS

#### A. INTRODUCTION.

Secondary items range from nuts, bolts, washers and repair parts to major components, such as engines and transmissions. This range of complexity results in acquisitions as intricate in their contractual requirements as those for major weapon systems or so noncomplex and inexpensive that simplified purchase procedures will suffice. However, the choice and application of an appropriate procurement method is dependent upon factors in addition to the expected cost of the acquisition and the physical characteristics of the secondary item. This chapter describes the general process of procuring a secondary item and the functions of the MSC organizational elements involved.

#### B. ACQUISITION PROCESS.

Determining and fulfilling a requirement for a secondary item at the wholesale level is neither a simple task nor typically a short one. The latter condition is generally a result of conditions imposed by the items required and the processes used in their acquisition. The AAA findings that these processes were inefficient attribute much of the fault to the supporting management information systems rather than the complexities of the process they support.

The following depiction of the acquisition process is necessarily generalized to accommodate the variety of decisions and actions required for an individual requirement and the varied approaches the MSC's use to accomplish an acquisition. It illustrates that the total process requires the interaction of many elements in addition to the central procurement activity to develop an adequate procurement package sufficient to obtain bids or proposals for specific

materials. Understanding this process is the first step in seeking means to correcting its inefficiencies.

1. Organizational Element Inputs.

The development of a complete procurement package and suitable procurement requires the attention of many functional areas. The following descriptions of the typical tasks involved supplements the work flowchart presented later in this chapter. The descriptions are neither meant to be all inclusive nor necessarily chronologically arranged. Organizational titles are the more common ones for the function involved but may differ at a given MSC.

a. Initiator.

The initiator of a requirement for a secondary item will normally be within the Directorate for Materiel Management through the operation of the Requirements Determination and Execution System (RD&ES). Requirements may also originate from a weapon system management office, product/project management office, or other MSC's/services.

b. Materiel Management Directorate - Item Management.

The Item Manager's role is a continuous one. He is responsible for assuring the correctness of the supply management data maintained within CCSS for assigned secondary items. The inventory and requirements data for an item are essential parts of the requirements computation and acquisition process. Key tasks performed by the item manager are:

- Maintenance of CCSS materiel management data to include verification of demand, return and disposal data, special program requirements, stock on hand or on order, fiscal status and applicable inventory management parameters.

- Verification that PWD's generated from the PD&ES process are valid and adequate to support procurement. The MSC can set parameters within CCSS to automatically generate and forward PWD's to procurement for specific weapon systems and/or below set dollar thresholds subject to future review and cancellation or adjustment. Nonautomatic PWD's are generated after the item manager reviews the Supply Control Study and approves (with or without adjustment) the recommended action.

- Updating (correct) National Stock Number Master Data Record (NSNMDR) data for future procurement.

- Coordination with procurement (the buyer) to amend or cancel a PWD due to changing requirements.

- Reserve and furnish Government Furnished Property and Government Loaned Property.

c. Materiel Management Directorate - Traffic Management.

The traffic management functional element provides advice and assistance to the buyer on an "as required" basis on such subjects as:

- Recommended transportation clauses;
- Traffic management data; and
- Evaluation of traffic management factors for award and administration of contracts.

d. Material Management Directorate - Packaging.

Preservation, packaging and packing requirements are normally determined by reference to specifications. Continued review of the requirements established in CCSS are required to assure only the minimum acceptable level is used in accordance with the intended use and destination of the item.

e. Management Information Systems Directorate (DMIS) - Standard Systems Operations.

The standard systems management element of DMIS is responsible for scheduling and running the CCSS and command unique programs which support the acquisition process. This includes the printing and initial distribution of the PWD and technical data package list (TDPL).

f. DMIS - Technical Data/Depository.

The technical data element is usually co-located with the command technical data depository. Element functions include:

- Maintaining the technical data in the depository.
- Building a TDP from the TDPL.
- Reproducing TDP's for bid/proposal sets based on buyer's request or command policy for automatic reproduction for competition items.
- Distributing TDP's.

g. Directorate for Maintenance or Logistic Engineering.

The function of reviewing the TDP to validate the technical data is assigned to either the Directorate for Maintenance or Logistic Engineering. In addition to the DMIS review to assure the TDP is complete, the validation process is used to verify that all recent changes to the drawings, specifications or standards and any special requirements for safety, testing, etc. have been included. A review is made to determine if any restriction to full competition can be removed or should be applied.

h. Office of the Comptroller - Finance & Accounting.

Since most commands use automatic certification for Army Stock Fund (ASF) requirements and system changes are underway to perform the same function for Procurement Appropriation - Secondary Items, the Comptroller's direct role

in the acquisition process is being reduced. The Comptroller will remain an active participant on manual PWD's that cannot be certified using the automated systems.

i. Directorate for Product Assurance.

Product Assurance specialists review the PWD and TDP to verify if the quality provisions/programs specified are adequate. This review is usually performed on an exception basis because of, e.g., a lack of quality provisions with the PWD due to missing NSNMDR data, requirements for first article tests, or known quality problems with a particular item.

j. Directorate for Procurement & Production.

The buyer and contracting officer are responsible for preparing and conducting the solicitation, bid or proposal evaluation and contract award to include the supporting procurement documentation. The magnitude of this task is impacted by such factors as the competitive status and quality of the procurement package, expected dollar value and the inputs from other command elements. A graphic depiction of this process is provided later in this chapter.

k. Legal Office.

The Legal Office is responsible for reviewing solicitation and award documentation for compliance with legal and regulatory requirements.

l. Small Business Office.

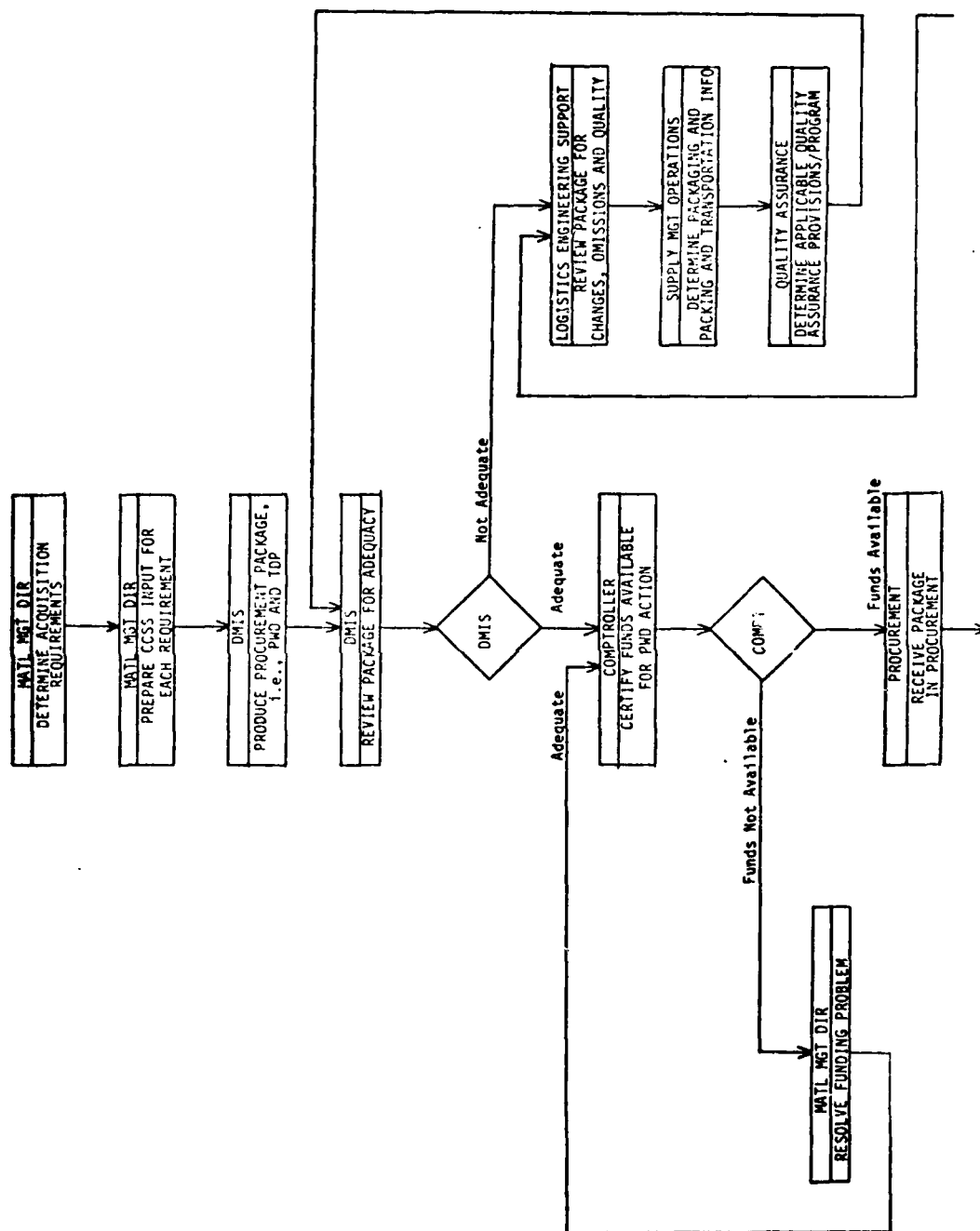
The Small Business Office reviews the requirement and the proposed procurement to assure accomplishment of policy objectives for the Small Business, Small Disadvantaged Business Utilization and Labor Surplus Area Programs to include coordination with the Small Business Administration.

## 2. Central Procurement Process Workflow.

A DELTA chart of the process (Figure 1)\* has been designed to illustrate the general workflow for accomplishing the Central Procurement function for a secondary item. The DELTA chart shows the actions and decisions that may be required for any procurement action. Requirements for specific decisions and the consequent courses of action are dependent on the characteristics of the procurement package. Similarly, the requirement for support from other command elements will vary with the complexity and adequacy of the package. With all the possible variations in requirements and types of procurement used to fulfill them, the DELTA chart is intended to show a general workflow of activities as performed at DARCOM MSC's.

---

\*Note: This is an updated version of the DELTA Chart of the Central Procurement System Process developed by the author for Central Procurement System Manpower Model, APRO 82-12. [3]



DELTA CHART OF CENTRAL PROCUREMENT SYSTEM PROCESS - CONTRACT EXECUTION

FIGURE 1

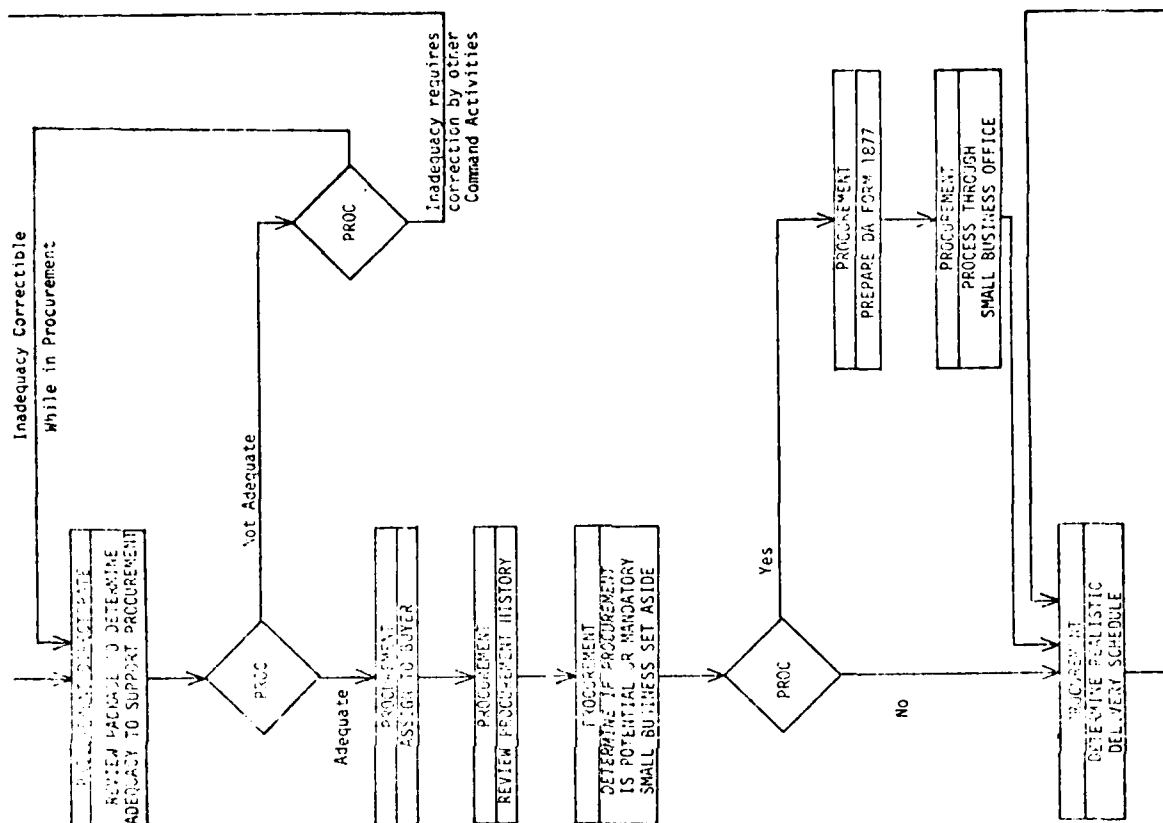


FIGURE 1 (CONTINUED)

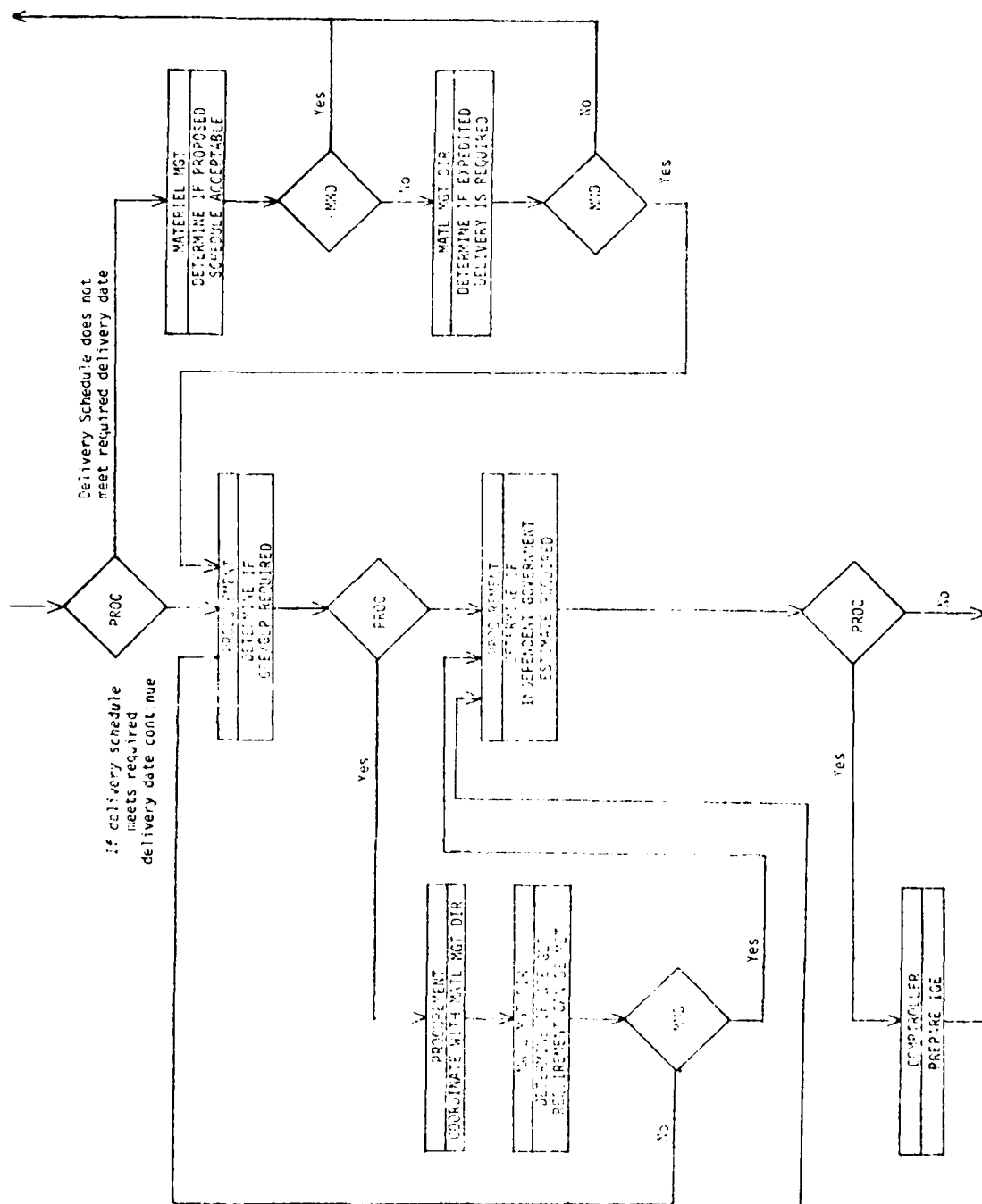


FIGURE 1 (CONTINUED)

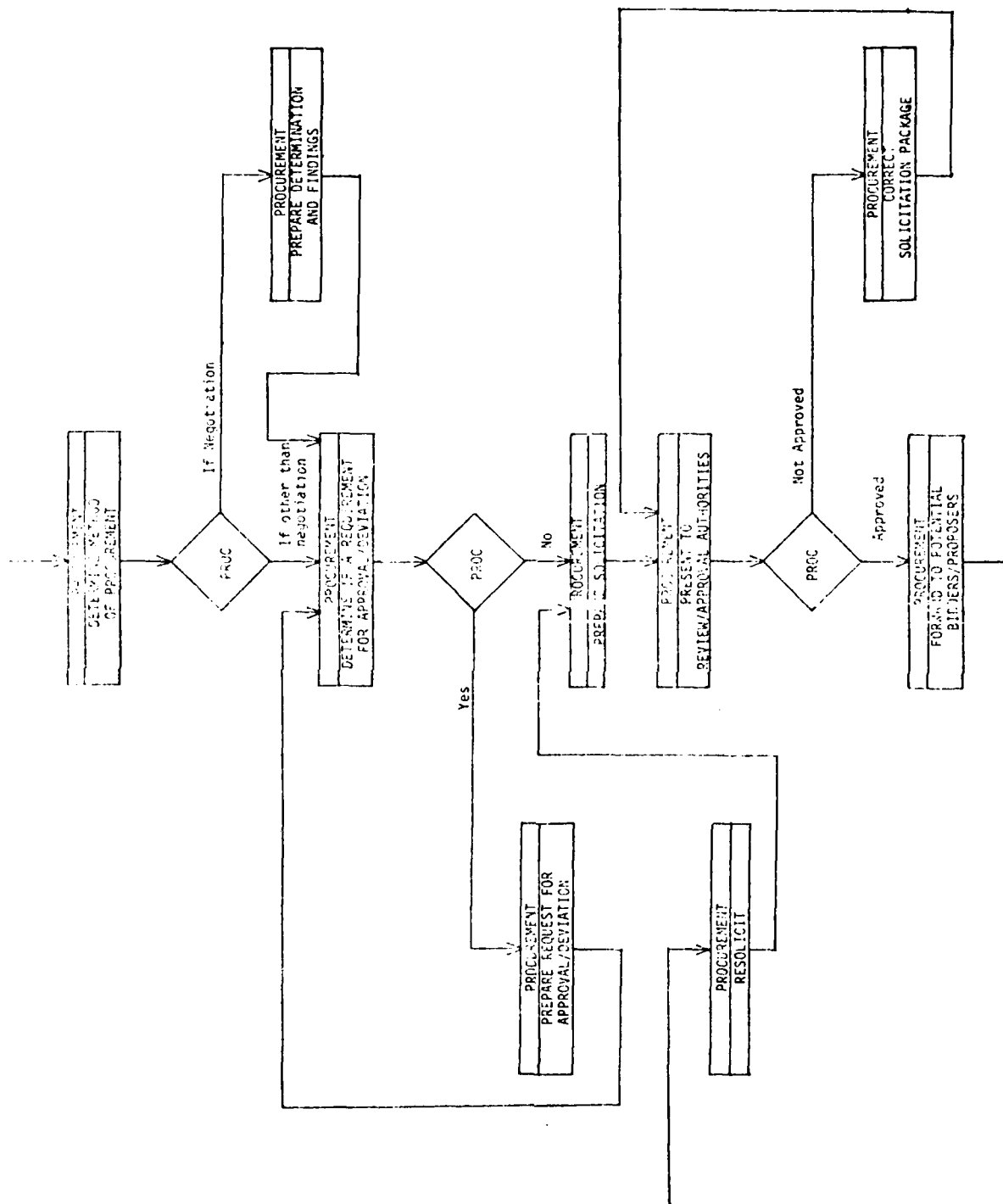


FIGURE 1 (CONTINUED)



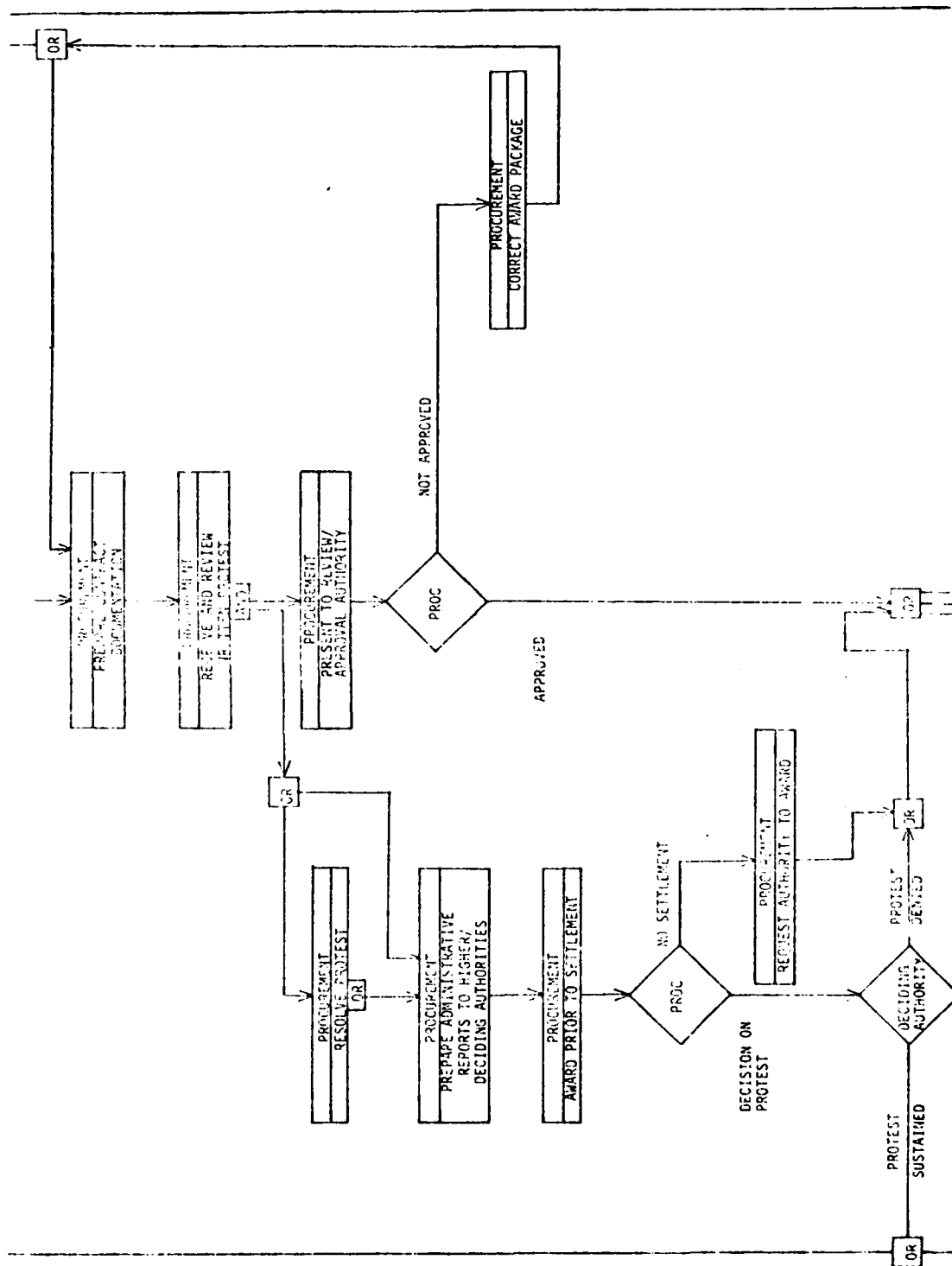


FIGURE 1 (CONTINUED)

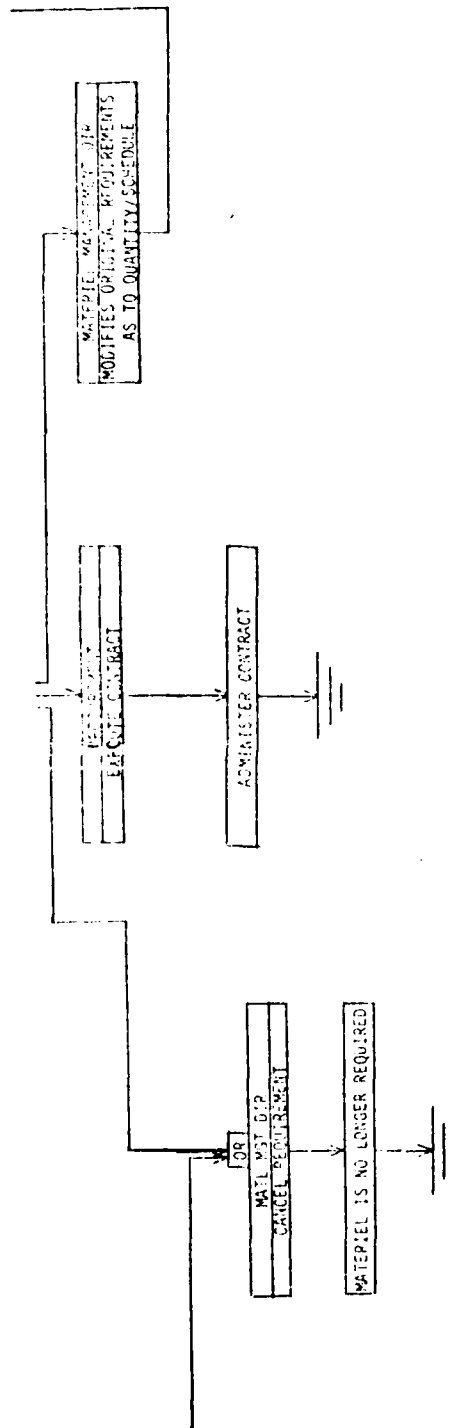


FIGURE 1 (CONTINUED)

C. MSC PWD WORKFLOWS.

As shown in the previous section, the administrative process of converting a requirement into a contract can be relatively simple or very complex depending on the characteristics of the requirement, the supporting procurement package and the method of procurement used. The process of validating the procurement package is accomplished during the phase of ALT commonly referred to as Pre-PALT. A review of PWD processing procedures used at the MSC's for secondary item procurements found several systems in use for the Pre-PALT phase.

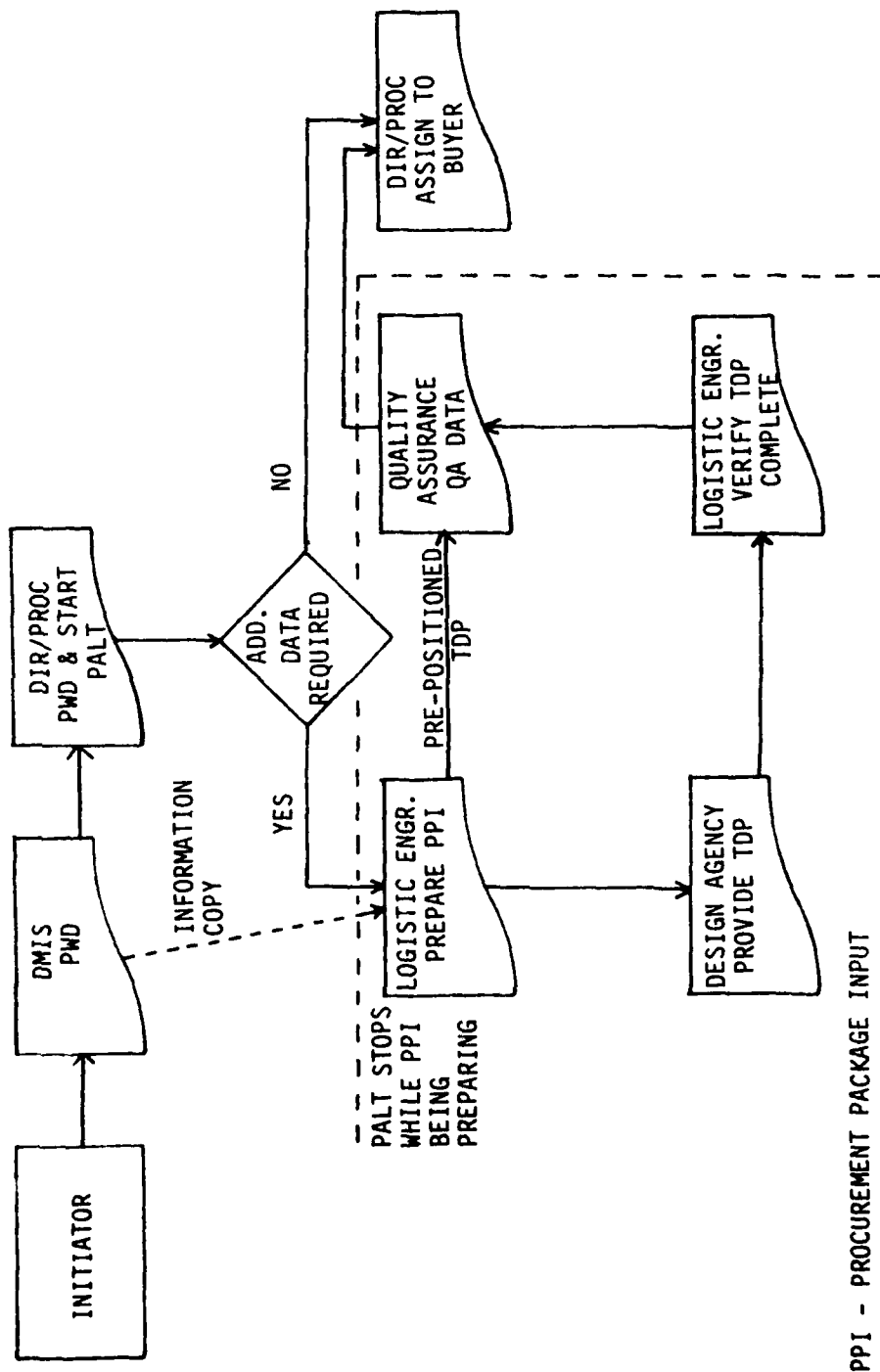
The basic tenet of the AAA recommendations for the Pre-PALT phase is that Pre-PALT processes should occur simultaneous with PALT. Simultaneous processing would permit the procurement activity to start developing the solicitation prior to the other functional elements completing their reviews and PWD processing actions. [13:32] The AAA logic is that earlier procurement involvement would shorten overall ALT. The observation that the procedures must be changed to shorten ALT is true. However, the methodology required to do so differs from the simultaneous one suggested by the AAA. A proven Air Force approach to ALT which has seen limited but successful application by the MSC's will be discussed in this section.

It bears emphasis that the determination of a requirement for further input to the procurement package is based on an analysis of the PWD. Each command has established its own review and routing criteria but some of the more common bases are dollar value of PWD; type of materiel; missing data; existing contracts or options for the same item; first article requirements; and type of funds. If the procurement package is complete or other command criteria are satisfied the PWD can be processed directly to procurement.

The following discussion of MSC Pre-PALT PWD processing systems is not meant to imply that all PWD's require additional data. As an example, the Troop Support and Aviation Materiel Readiness Command (TSARCOM) estimates only 25% of all new PWD's require a TDP. The TDP percentage varies between the MSC's depending on the competitive status of their procurement packages but no MSC would require TDP's for 100% of its PWD's. (Note: Effective 1 October 1983, TSARCOM was split into two new commands, the Aviation Systems Command (AVSCOM) and the Troop Support Command (TROSCOM)). The TSARCOM PWD processing system will continue to be used at the new commands until at the least second quarter of FY 84.)

1. Ammunition, Munitions and Chemical Command (AMCCOM) Pre-PALT PWD Flow.

The flow of secondary item PWD's at AMCCOM is shown at Figure 2. [12:10] The AMCCOM process is unique in two respects. It is the only command that starts the PALT clock by registering the acceptance of the PWD in procurement prior to any reviews of the procurement package and then stopping PALT if the package is incomplete. Pre-PALT ALT is accumulated when a procurement package is returned for the activities normally performed by the other MSC's prior to acceptance by procurement. The second difference is that, except for tool and equipment items, AMCCOM is dependent upon design agencies at locations remote to its procurement activity at Rock Island Arsenal to review and provide the latest configuration of TDP's. The TDP must be certified by the design agency before it can be used or held for a specified time period at AMCCOM as a prepositioned validated TDP. The prepositioned TDP can be used during the validation period without further design agency coordination.



AMCCOM PRE-PALT PWD FLOW

FIGURE 2

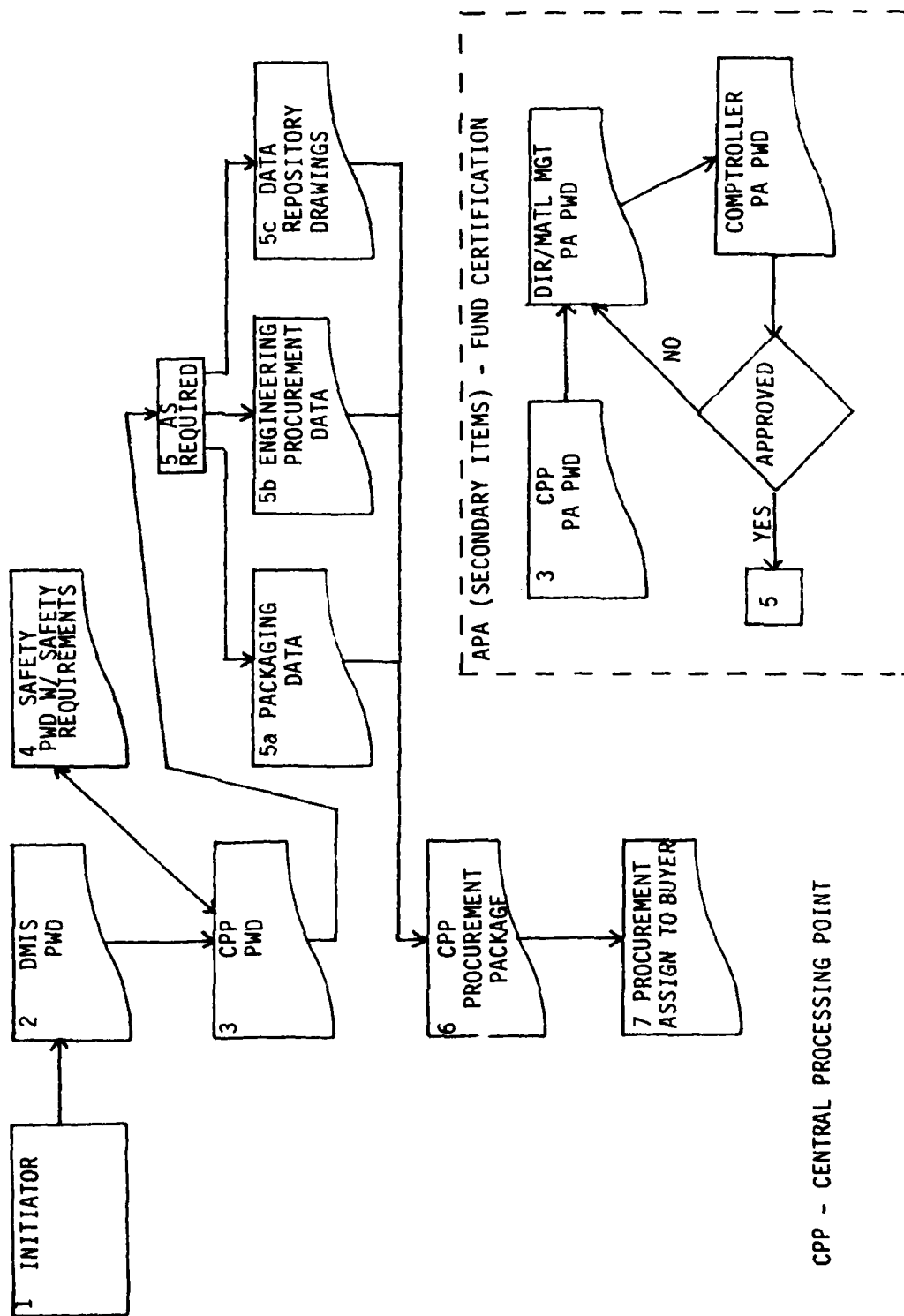
## 2. Communications-Electronic Command (CECOM) Pre-PALT PWD Flow.

CECOM's PWD flow as illustrated at Figure 3 is perhaps the closest example of parallel processing found in the MSC's. However, it is not a simultaneous process of the type recommended by AAA. The PWD is not forwarded to the buyer until the procurement package has been validated by the appropriate functional elements.

The insert on Figure 3 applies to Procurement Appropriation-Secondary Items (PAS). The requirement for manual certification of PAS PWD's by the Comptroller is common to all the MSC's. The certification of ASF PWD's has been automated in CCSS. A similar system to automate the certification of PAS PWD's is in the process of being installed at all MSC's. When completed only manually prepared secondary item PWD's will have to be processed through the Comptroller. Due to this change, the Comptroller function was only shown for one MSC.

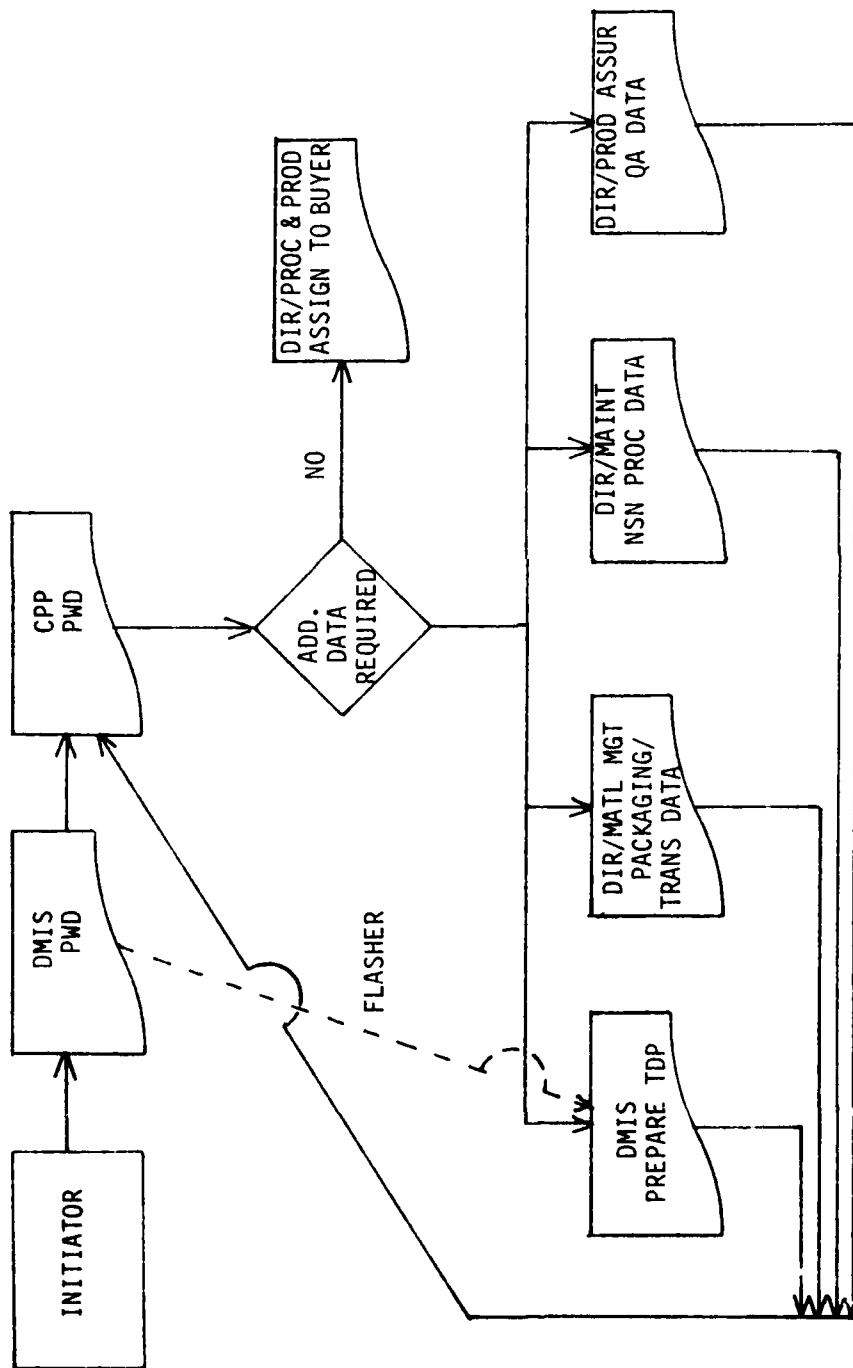
## 3. TSARCOM Pre-PALT PWD Flow.

The TSARCOM process (Figure 4) is the most repetitive of the MSC procedures. The Central Processing Point (CPP) is responsible for determining if and from which source(s) additional data is required. According to the TSARCOM procedure [19:A-2], when the functional element has completed its action the PWD is returned to the CPP for redistribution to other elements or to be forwarded to the buying activity. In actual fact, the PWD may be forwarded from functional element to functional element rather than processed back through the CPP when the first element knows what other data is required. Additionally, the NMIS preparation of a TDP commences when a CCSS report is issued at the time of PWD generation. The PWD is returned to NMIS for the TDP only when all other inputs have been completed and the TDP has not been received in the CPP.



CECOM PRE-PALT PWD FLOW

FIGURE 3



CPP - CENTRAL PROCESSING POINT, DIRECTORATE FOR PROCUREMENT & PRODUCTION

TSARCOM PRE-PALT PWD FLOW

FIGURE 4

A stratified sample of 104 TSARCOM secondary item PWD's was taken from an Open PWD Register to determine the average number of days a PWD spends in a processing point. The average is based on the number of days a PWD spent in a processing point on each occasion it was routed to that point. The PWD's were routed a total of 510 times to various processing points including to the Procurement element and returns from Procurement for additional data, corrections, and changes. The results of the survey are shown at Table 1 and Figure 5.

The CPP, as used at TSARCOM, does add to the total ALT as was stated by the AAA. However, the average times added to ALT every time a PWD has to be sent to DMIS, Maintenance or Materiel Management are more significant. A method to minimize this Pre-PALT processing time is discussed in paragraph C.5. below.

#### 4. Other MSC Pre-PALT PWD Processes.

The remaining MSC's, Missile Command (MICOM) and Tank-Automotive Command (TACOM) [18], Pre-PALT processes are sequential systems. A PWD requiring review and/or additional data is processed from point to point until the review is complete. Both systems do have provisions for expediting the movement of the PWD to procurement based on exception criteria.

#### 5. Air Force Procurement Request Processing.

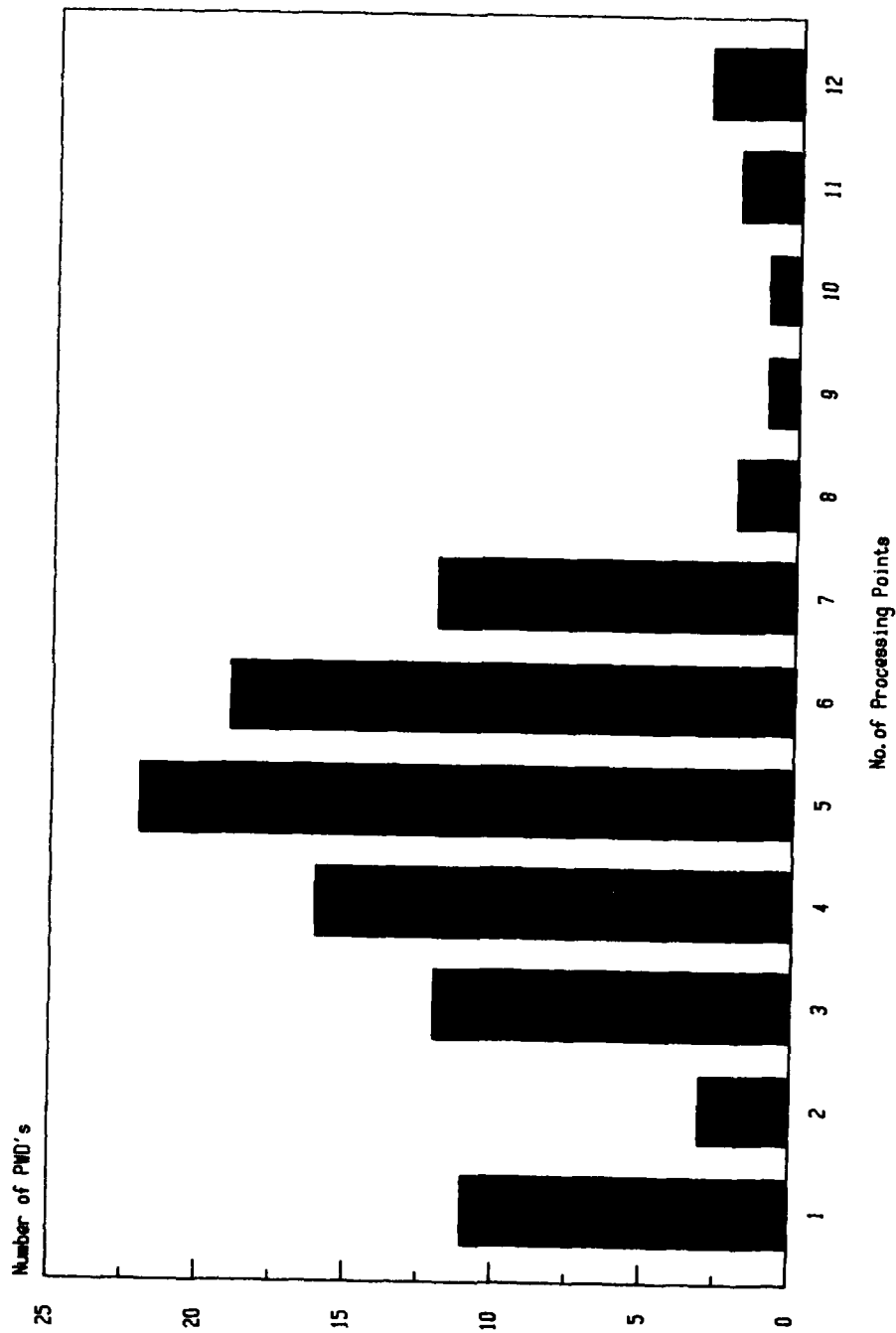
The Air Force (AF) and Army approaches to Pre-PALT processing are diametric. The MSC's use the issuance of a PWD as the trigger to start the review and update of the procurement package and especially the TDP. Therefore, any time used to input corrections or changes to the procurement package is additional ALT. This can lead to Pre-PALT ALT's for individual actions in excess of ninety days when the TDP must be clarified by the original manufacturer.

TABLE 1  
AVERAGE DAYS FOR PWD'S IN INDIVIDUAL TSARCOM PROCESSING POINTS

PROCESSING POINT	NUMBER OF TIMES PWD'S WERE ROUTED THROUGH PROCESSING POINT	AVERAGE CALENDAR DAYS IN PROCESSING POINT PER ROUTING
Central Processing Point*	120	3.4
DMIS (TDP)**	48	21.8
Directorate for Maintenance	46	17.8
Directorate for Material Management	74	11.7
Product Assurance Directorate	60	2.8
Comptroller	16	3.4
Directorate for Procurement & Production	146	57.5
 TOTAL PROCESSING POINT ACTIONS	 510	

\* Does not include routings through CPP recorded in PASS as received in the next processing point the same date as forwarded to the CPP by a prior processor.

\*\* Does not include TDP preparation time expended prior to actual assignment of the PWD to DMIS by the CPP.



NUMBER OF PROCESSING POINTS ENCOUNTERED BY TSARCOM PWD'S

FIGURE 5

Air Force Logistics Command (AFLC) procedures [1] require the functional elements with procurement request (PR; the AF's PWD) coordination responsibility to perform their data maintenance on a continuous basis rather than wait for a PR to be issued. This minimizes the Pre-PALT time by limiting its use to a final review cycle prior to forwarding the procurement package to procurement. The review cycle is also done simultaneously by the action elements to further minimize the time required to process a package.

The adoption of this operating concept at all the MSC's was recommended in the DARCOM Administrative Leadtime Study. [6:17] Due to resource constraints, MSC applications have been limited to a select group of items with significant dollar weighted ALT's. Dollar weighted ALT is a function of the quantity demanded and the unit price as well as the number of days of actual ALT for each item. From a budgeting viewpoint reducing the ALT for a relatively small number of high dollar value/high demand items can have a greater impact on the ALT requirement in the secondary item budgets than an overall but smaller improvement for all secondary items. [6:4] Consequently, the MSC's have used their limited resources (in particular, manpower) to obtain the greatest impact. The fact that the MSC's have seen significant improvements in their dollar weighted ALT substantiates the value of performing procurement package maintenance prior to ALT.\*

D. SUMMARY.

The PWD processing procedures used by the MSC's are based on the necessity for an accurate procurement package in order to develop a complete solicitation. Selection and development of the solicitation is dependent upon factors in

---

\*Based on data provided to DARCOM HQ under ASF Management Action Plan reporting requirements.

addition to the knowledge of the item required. Determination of delivery schedules, availability of a TDP and requirements for quality, safety or security are examples of the factors which influence the type of solicitation and its provisions. The Pre-PALT procedures currently in use by the MSC's do cause longer ALT but the logical method to reduce ALT is not the AAA recommendation for simultaneous processing. Procurement packages should be maintained ready for use when required rather than waiting until the actual requirement is generated to verify if the package is usable.

### CHAPTER III

#### AUTOMATED SYSTEMS AND THE PALT MODEL

##### A. INTRODUCTION.

The AAA felt the procedures used to maintain visibility over PWD's accomplished their purpose to the detriment of efficient utilization of ALT. This chapter discusses the CCSS systems used to maintain PWD visibility and measure ALT performance; and their use in developing a PALT model.

##### B. CCSS PROCESSES.

The AAA report alleged the Procurement Ageing and Staging System (PASS) contributed significantly to longer ALT. [13:34] The AAA perception is that PASS is the reason the MSC's use step-by-step procedures rather than simultaneous processing. This section discusses what PASS is and the AAA's recommendation for PASS. Other CCSS processes and their roles or potential uses in ALT management are included in this section.

###### 1. PASS.

###### a. General.

The PASS is a standard CCSS program used by all MSC's. [14] It is a management tool for monitoring the location, status and age of PWD's. Through the use of processing point codes the MSC's can identify individual action offices processing PWD's and the elapsed times for their actions. Milestone codes are used to indicate the completion of significant events in processing a PWD through the PALT phase of ALT. Status codes supplement the milestone codes by providing a means to report specific actions or problems. A PWD will stay in the PASS until awarded or cancelled.

Inputs to PASS to report processing transactions are run daily. The actual transmittal of the PWD is by physical transfer from processing point to point. Backlogging of PASS inputs due to system delays will not cause any increase in ALT since the actual PWD transfer is not affected.

A review of PASS usage at the MSC's found no evidence that PASS causes longer ALT or dictates the system used to process PWD's. PASS and the identification of processing points is configured to the processing system established at the individual MSC and not the reverse. Step-by-step processing predates PASS and is the result of the long used practice of validating the procurement package.

b. PASS Status Codes.

PASS status codes are designed to provide information about a PWD that is physically transferred to an activity outside the originating MSC; suspended; rejected; awarded using an option or has experienced specific types of actions or problems. Use of any of the codes signifying action is required from outside the procurement activity will stop PALT, but ALT continues to accumulate. PALT is restarted when the necessary action has been taken and the responsibility for PWD processing has returned to procurement.

The AAA suggested use of status codes to monitor PWD processing [13:34] is not practical for two reasons. The primary use of PASS is to monitor the location and age of thousands of PWD's at each MSC. Many of the current status codes, to include those restricted to procurement input, may be used by more than one processing point. Status codes, therefore, would not positively identify processing points to which PWD's are assigned unless the status codes are expanded to provide codes for each processing point. As the AAA found, none of the MSC's use status codes for visibility of PWD locations. [13:36]

Secondly, the extensive use of status codes for visibility purposes would not mandate any changes to the actual processing system. The function of PASS is to provide information on the operation of the MSC processing system. PASS (and its status codes) is not a processing system.

## 2. Other ALT Monitoring Methods.

### a. Central Procurement Workload Measurement.

The Central Procurement Workloading Report (127 Report) [15] is a monthly report of the procurement workload accomplished and in progress. One of its functions is to provide information on the average ALT and PALT, by method of procurement, for all awarded PWD's and separately for secondary item awards. The 127 Report is used by DARCOM Headquarters and the MSC's to monitor ALT and PALT performance against individual MSC standards. The logic behind individual standards for both procurement methods and MSC's recognizes the different mixes of materials and markets and, therefore, contracts the MSC's encounter in managing their assigned commodities.

### b. Potential Future Development.

The Procurement Automated Manpower Utilization and Projection System (PAMUPS) [17] is an approach to automating and applying work measurement principles to the central procurement function. The application of those principles when combined with procurement workload projections provides a means to justify manpower requests for the central procurement program. PAMUPS documents the actual procurement workload by type of instrument used and all solicitation or contract complexities encountered in the award and administration of the instrument.

While PAMUPS will not specifically measure ALT and PALT, it will measure the actual time used to award the instrument as a means of evaluating the degree

of efficiency with which procurement manpower are being utilized. After PAMUPS has been in use long enough to build a historical file, it will be possible to determine the networks of procurement instruments and complexities most commonly used. Since PASS data is part of the automated PAMUPS record, it will be possible to determine by type of instrument and complexities the average time used to make awards.

Development of solicitation and award time phased PALT standards from PAMUPS data would allow PALT to be monitored throughout the procurement activity's operation. A PWD could be tracked by milestone to determine if corrective action is required to prevent excessive PALT. This would be an improvement over the current system which generally identifies and attacks problems with PWD's that already exceed the PALT standards. The ability to determine if a PWD is off schedule during PALT will increase the opportunities to take remedial action to prevent or minimize the effects on ALT.

#### C. PALT MODEL.

One of the study objectives was to develop a PALT model. This would be a tool for determining minimum days based on regulatory requirements for each PALT PWD process. The need for the model is based on the commonly held assumption that mandatory times set by laws and regulations are the cause for long PALT.

A review of the Defense Acquisition Regulation (DAR) [5] and the Army [4] and DARCOM [16] supplements to the DAR identified requirements that specify minimum times for performance of solicitation and award actions. The fourteen actions found are listed in Table 2. It should be noted that even though the requirements do have an impact on PALT they do not necessarily preclude the contracting officer from completing other tasks during the regulatory leadtimes.

TABLE 2  
REGULATORY IMPACTS ON ADMINISTRATIVE LEADTIME

REQUIREMENT	CITE	THRESHOLD	IMPACT ON LEADTIME
Certificate of Competency (COC)	DAR 1-705.4(c)	<p>a. Solicitation worth \$25,000 or more; PCN has determined Small Business to be responsible but nonresponsible.</p> <p>b.1. Bid of small business is being rejected for non-responsibility on unreserved portion of a partial set-aside solicitation.</p> <p>b.2. Appeal to HQ, SBA.</p>	<p>If no decision within 5 working days after referral to Small Business Administration (SBA) Referring activity must contact SBA to verify if a COC is being processed.</p> <p>Award is withheld until SBA action on COC or 15 working days whichever is earlier.</p> <p>15 days in b.1. above suspended.</p>
Data on Proposed Procurement, NA Form 1877	ADAR 1-751.4	Each solicitation, advertised or negotiated, which may result in an award of more than \$10,000.	PCN must submit NA Form 1877 with sufficient leadtime to permit Small and Disadvantaged Business Utilization (SABU) review at least 10 working days before issuance of the solicitation.
Pre-Award Surveys	DAR 1-905.4(b)	May be requested by PCN whenever the solicitation is valued at \$25,000 or more and there are questions on the potential contractor's ability to successfully perform.	NCAS has 7 working days after receipt of request for survey to perform survey and submit report.

TABLE 2 (CONTINUED)  
REGULATORY IMPACTS ON ADMINISTRATIVE LEADTIME

REQUIREMENT	CITE	THRESHOLD	IMPACT ON LEADTIME
Synopsis	DAR 1-1003.1(a) and DAR 1-1003.2	Every proposed advertised or negotiated procurement which result in an award of \$10,000 is more except for classified requirements and negotiation exceptions 1 thru 9.	Synopsis in the Commerce Business daily not later than 10 days before the issuance of solicitation or placement of an order against a previously unsynopsized Basic Ordering Agreement.
Acquisition of Qualified Products	DAR 1-1107.1(c)(2)	Whenever qualified products are to be obtained.	As a minimum, PCO shall allow 3 calendar days between the date of issuance of the solicitation and opening of bids or the award of a negotiated contract.
Brand Name or Equal Purchase Descriptions	DAR 1-1206.2	Modifications to manufacturer's standard product required to meet purchase description are anticipated.	Minimum of 30 calendar days shall be allowed before bid opening.
Withholding Award (EPA)	DAR 1-2302.5	EPA is considering listing a facility proposed to be used for contract performance.	Director, Office of Federal Activities. EPA may request the PCO to delay award not to exceed 15 working days while a decision is being made.
Bidding Time	DAR 2-202.1	All Invitation for Bids (IFB)	As a general rule, bidding time shall be no less than 30 calendar days.

TABLE 2 (CONTINUED)  
REGULATORY IMPACTS ON ADMINISTRATIVE LEADTIME

REQUIREMENT	CITE	THRESHOLD	IMPACT ON LEADTIME
Amendment of IFB Amendment of Request for Proposals (RFP) or Request for Quotations (RFQ)	DAR 2-208(b) DAR 3-505(a)	All changes to a solicitation for quantity, specifications, schedules, etc. or to correct a defective or ambiguous solicitation.	Postponing the bid opening or closing date must be considere based on the change and time remaining until bid opening or closing date.
Protests Against Award	DAR 2-407.8(b) and DAR 3-509	Receipt of an oral protest	PCO may require written confir tion by a specified time and withhold award until that time.
Field Pricing Reports	DAR 3-801.5(b)(3)	Specific dollar requirements by type contract (DAR 3-801.5(b)(1)) or lack of knowledge on a contractor.	PCO assigns realistic deadline for receipt of report.
Contract Audit as a Pricing Aid	DAR 3-809(b)(1)	Audit required on contractor pricing proposal.	PCO should provide as much tim as possible for the auditor to perform his evaluation.
Buy American Act - Evaluation of Offers	DAR 6-104.4(c)	Submission of proposed awards for Secretarial decision.	Forwarded to allow 21 days for processing and consideration with exceptions for specific items or market conditions.
Affirmative Action Compliance Programs - Determinations	DAR 12-807.2	Pre-Award clearance required for contracts and subcontracts of \$1 million or more.	Submit clearance request to AF at least 30 days prior to pro- posed award date. If determin tion is not made within 30 days, PCO shall withhold award an additional 15 calendar days or until clearance is received. Award may be made if 15 days expires without a determination.

Modeling these few regulatory leadtimes would be relatively simple. However, what Table 2 does not show, and the model would have to account for, are the multitude of requirements that are placed on a procurement action as it broaches different dollar thresholds. A study by the Logistics Management Institute in 1981 found 317 requirements in the DAR activated at one of 49 dollar thresholds. [9:B-1] Meeting these threshold requirements is just as time consuming as waiting out required leadtimes.

With the levels of complexities that a procurement instrument may be subjected to and the different MSC's approaches to acquiring their assigned commodities, developing a model or models of the process would require detailed examination of a large sample for each type of instrument at each MSC. This is not an impossible task but an unnecessary effort with the propagation of PAMUPS to the MSC's. PAMUPS collects data on the frequency which complexities occur by type of procurement instrument at each MSC. After sufficient time for PAMUPS to build historical files, modeling data can be extracted and programs designed to determine the networks and queues involved with a specific type instrument. This would not produce an optimum PALT model, but it would provide a clearer understanding of a complex process.

CHAPTER IV  
CONCLUSIONS AND RECOMMENDATIONS

A. CONCLUSIONS.

1. The existing Pre-PALT PWD processes do contribute to the length of ALT.
  - a. The MSC's use of ALT to prepare and coordinate the procurement package is an expensive methodology since it consumes ALT time.
  - b. Simultaneous processing of the procurement package and preparation of the solicitation is not practical since information is required from the procurement package to develop the solicitation.
2. PASS does not increase ALT. It is only a mechanism for monitoring visibility of the location and processing status of a PWD. It only reflects the process it supports.
3. PASS status codes do not increase ALT. They would not decrease ALT if used to maintain visibility over PWD's since they would only replace the current processing point codes without changing the PWD process.
4. An alternative to PASS for PWD control is not required.
5. The development of detailed PALT models, while possible, would be premature considering the data that will be available from PAMUPS after it has been operational at the MSC's for a fiscal year or longer.

B. RECOMMENDATIONS.

1. The MSC's current efforts at reducing ALT for significant dollar weighted ALT secondary items by reducing Pre-PALT actions should be expanded to the lowest practical level of requirements.
2. After PAMUPS has been in use a sufficient time to build historical files at each MSC, DARCOM should use PAMUPS data to develop PALT models.

#### SELECTED BIBLIOGRAPHY

1. Air Force Logistics Command. Acquisition and Due-In System (ADIS) (J041), AFLC Regulation 70-11. Wright-Patterson Air Force Base, OH 45433, April 1981.
2. Correia, Charles A. and Frank Kelsey. Measuring Productivity in DARCOM's Central Procurements Offices, APRO 509-05. Army Procurement Research Office. Ft. Lee, VA 23801, February 1978.
3. Correia, Charles A. and Charles M. Lowe, Jr. Central Procurement System Manpower Model, APRO 82-12. Army Procurement Research Office. Ft. Lee, VA 23801, April 1983.
4. Department of the Army. Headquarters. Army Defense Acquisition Regulation Supplement, 1976 Edition. Washington, DC 20310.
5. Department of Defense. Defense Acquisition Regulation, 1976 Edition. Washington, DC 20301.
6. Lowe, Charles M., Jr. DARCOM Administrative Leadtime Study, Special Report APRO 82-56, Army Procurement Research Office. Ft. Lee, VA 23801, May 1982.
7. Newlin, Kimrey D. and Edward T. Lovett. Procurement Administrative Lead Time (PALT) Management and Performance Criteria, APRO 516. Army Procurement Research Office. Ft. Lee, VA 23801, March 1977.
8. Office of the Inspector General. Procurement Workload Management at Selected Inventory Control Points. (No. 83-078). Arlington, VA 22209, February 1983.
9. Procurement Workload Versus Workforce--A Growing Imbalance. Logistics Management Institute, Washington, DC 20016, May 1981.
10. US Army Armament Materiel Readiness Command. Pre-Award Reports, ARRCOM Regulation 700-23. Rock Island, IL 61229, April 1983.
11. . Procurement Ageing and Staging System (PASS), ARRCOM 700-13. Rock Island, IL 61229, June 1983.
12. . Procurement Package Processing, ARRCOM Regulation 700-2. Rock Island, IL 61299, March 1983.
13. US Army Audit Agency. US Army Materiel Development and Readiness Command Contracting Workload Management, (NI 83-202). Washington, DC 20310.
14. US Army Automated Logistics Management Systems Activity. CCSS Operating Instructions (Functional) Procurement Ageing and Staging System, Vol. 1, CCSSOI 18-715-101. St. Louis, MO 63188.

SELECTED BIBLIOGRAPHY (CONT'D)

15. US Army Materiel Development and Readiness Command. Central Procurement Workloading Reports (RCS DRCP-127), DARCOM 5-4. Alexandria, VA 22333, June 1981.
16. \_\_\_\_\_. DARCOM Procurement Instruction, 1976 Edition. Alexandria, VA 22333.
17. \_\_\_\_\_. Procurement Automated Manpower Utilization and Projection System - Structured Analysis. Alexandria, VA 22333.
18. US Army Tank-Automotive Command. Administrative Lead Time Study Team Report. Warren, MI 48090, June 1982.
19. US Army Troop Support and Aviation Material Readiness Command. Processing Procurement Work Directives (DARCOM Form 1095g), TSARCOM Regulation 725-10 w/C3. St. Louis, MO 63120, May 1980.

#### STUDY TEAM COMPOSITION

Charles M. Lowe, Jr., Procurement Analyst, US Army Procurement Research Office, Fort Lee, Virginia. B.B.A., East Texas State University, 1974; M.B.A., Southern Illinois University-Edwardsville, 1977; M.S., Florida Institute of Technology, 1978. Prior to joining the Army Procurement Research Office, Mr. Lowe was a Procurement Analyst in the Directorate for Procurement and Production, US Army Troop Support and Aviation Materiel Readiness Command.

Unclassified

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER APRO 83-03	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle)  DARCOM Procurement Work Directive Processing Methodology		5. TYPE OF REPORT & PERIOD COVERED  Final
		6. PERFORMING ORG. REPORT NUMBER
7. AUTHOR(s)  Charles M. Lowe, Jr.		8. CONTRACT OR GRANT NUMBER(s)
9. PERFORMING ORGANIZATION NAME AND ADDRESS US Army Materiel Systems Analysis Activity Army Procurement Research Office Fort Lee, VA 23801		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS
11. CONTROLLING OFFICE NAME AND ADDRESS US Army Materiel Development and Readiness Command ATTN: DRCPP-SS 5001 Eisenhower Ave., Alexandria, VA 22333		12. REPORT DATE May 1984
		13. NUMBER OF PAGES 41
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office)		15. SECURITY CLASS. (of this report)  Unclassified
		15a. DECLASSIFICATION/DOWNGRADING SCHEDULE
16. DISTRIBUTION STATEMENT (of this Report)  Distribution of this document is unlimited.		
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)		
18. SUPPLEMENTARY NOTES		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number)  (U) Logistics; (U) Procurement; (U) Systems Analysis		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number)  An Army audit Agency (AAA) audit of US Army Materiel Development and Readiness Command (DARCOM) contracting workload management found the Procurement Work Directive (PWD) processing procedures were not efficient. The AAA believed alternate procedures could be developed to allow earlier involvement of the central procurement activity in PWD processing. Changes to the Procurement Ageing and Staging System (PASS) were also recommended to improve its usefulness as a workload management tool. The objective of improving PWD processing is to reduce		

DD FORM 1 JAN 73 1473

EDITION OF 1 NOV 65 IS OBSOLETE

Unclassified

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

Unclassified

SECURITY CLASSIFICATION OF THIS PAGE(When Data Entered)

Block #20 continued.

administrative leadtime (ALT) inventory requirements.

While the MSC's procedures do contribute to longer ALT, the AAA recommended use of simultaneous PWD processing by procurement and other MSC's activities is not the best solution. The current practice of validating and updating the procurement package, after a PWD is issued, which the AAA felt could be done while procurement develops the solicitation, should be accomplished on a continuous basis instead of during ALT. The AAA recommended changes to PASS would not reduce ALT or improve the performance of PASS functions. Development of models of the processes required by the use of different procurement instruments and their impacts on ALT will be possible using data that will be available from the new Procurement Automated Manpower Utilization and Projection System (PAMUPS) after it has been in use for a minimum of a fiscal year.

Unclassified

SECURITY CLASSIFICATION OF THIS PAGE(When Data Entered)

**DATE**  
**ILME**